

**Notice of Allowability**

Application No.

10/783,306

Applicant(s)

DOERR, CHRISTOPHER  
RICHARD

Examiner

Kianni C. Kaveh

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/20/2004.
2. ☒ The allowed claim(s) is/are 1-5, 12, 13, 16 and 17.
3. ☒ The drawings filed on 20 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date 6 | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                 | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |



KAVEH KIANNI  
PRIMARY EXAMINER

Art Unit: 2883

Applicant's election without traverse of claims 1-5, 12-13 and 16-17 in a telephone conversation on July 26, 2005 with Mr. Wall is acknowledged. The reason for the Restriction is as follows:

This application contains claims directed to the following patentably distinct species of the claimed invention: I: Group claims 1-5, 12-13 and 16-17 directed to sets of waveguides in which the adjacent waveguides of each set having a path-length difference related to a non-zero integer multiple of a wavelength located between the center wavelengths of the adjacent waveguides; II: Group claims 6-11 and 14-15 directed to a first and second waveguide grating routers and sets of waveguides in which the adjacent waveguides of each set having a path-length difference  $(L_m) - L_{(m-1)}$ , as specified in the claim; III: Group claim 18 is directed to a first means, second means and third means for multiplexing optical signals, supporting transmission of the signals and receiving of the signals.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Currently, none of the claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of

Art Unit: 2883

the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. Wall on July 26, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-5, 12-13 and 16-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-11 and 14-15 and 18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

#### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eamon J. Wall on July 26, 2005.

This examiner's Amendment is allowed because the applicant's election of claims 1-5, 12-13 and 16-17 has been without traverse. Thus the non-elected claims 6-11 and 14-15 and 18 are cancelled by the examiner in order to make the case allowed.

*Please cancel claims 6-11 and 14-15 and 18*

***Reason for Allowance***

Claims 1-5, 12-13 and 16-17 are allowed for the following reasons:

The instant application is deemed to be directed to a nonobvious improvement over the invention patented in (Doer et al. 'Integrated Band Demultiplexer Using Waveguide Grating Routers', IEEE PHOTONICS TECHNOLOGY LETTERS. VOL. 15. NO. 8., AUGUST 2003, pages 1088-1090), as well as in US Pat. No. (Hansen et al., US 20020063928 A1).

Claim 1 is allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein the plurality of waveguides is partitioned into at least two sets of waveguides, each set of waveguides corresponding to a particular passband in the band filter, the waveguides in a set having unequal path lengths, and the adjacent waveguides within each set having a path-length difference related to a non-zero integer multiple of a wavelength located between the center wavelengths of the adjacent waveguides in combination with the rest of the limitations of the base claim.

Claims 2-5, 12-13 and 16-17 depend on claim 1 and therefore they are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Citation of Relevant Prior Art***

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Yoo 6519062

Doerr et al. 6240118

Glance 5488500

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9306 (for formal communications intended for entry)

Art Unit: 2883

**or:**

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.



K. Cyrus Kianni  
Primary Patent Examiner  
Group Art Unit 2883

**KAVEH KIANNI**  
**PRIMARY EXAMINER**

August 4, 2005